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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,653

11/16/2006

Wei Cheng

05-937-B5

5425

20306

7590

02/05/2008

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EXAMINER

JABBLE, CECILIA M

ART UNIT

PAPER NUMBER

1624

MAIL DATE

DELIVERY MODE

02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/576,653

Applicant(s)

CHENG ET AL.

Examiner

CECILIA M. JAISLE

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-43 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED OFFICE ACTION

Lack of Unity

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- I. Claims 1-12 and 34-36, drawn to compounds of Formula I where only one of B, D and E is N, classified in class 546, subclasses 268.1, 286, 287, 288, 289 and 290, *inter alia*, a pharmaceutical composition thereof, and a metabolite thereof, classified in class 514, subclasses 336, 344, 345, 349, 350, 351 and 352, *inter alia*.
- II. Claims 1-36, drawn to compounds of Formula I where only two of B, D and E are N, classified in class 544, subclasses 297, 298, 309, 322, 323, 334 and 335, *inter alia*, a pharmaceutical composition thereof, and a metabolite thereof, classified in class 514, subclasses 256, 269, 272, 274 and 275, *inter alia*.
- III. Claims 1, 2 and 34-36, drawn to compounds of Formula I where all three of B, D and E are N, classified in class 544, subclasses 194, 204, 211 and 212, *inter alia*, a pharmaceutical composition thereof, and a metabolite thereof, classified in class 514, subclasses 241 and 245, *inter alia*.

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IV. Claims 37-40 and 42, drawn to a method of modulating the *in vivo* activity of a kinase using the compounds of Group I, classified in class 514, subclasses 336, 344, 345, 349, 350, 351 and 352, *inter alia*.

V. Claims 37-40 and 42, drawn to a method of modulating the *in vivo* activity of a kinase using the compounds of Group II, classified in class 514, subclasses 256, 269, 272, 274 and 275, *inter alia*.

VI. Claims 37-40 and 42, drawn to a method of modulating the *in vivo* activity of a kinase using the compounds of Group III, classified in class 514, subclasses 241 and 245, *inter alia*.

VII. Claim 41, drawn to a screening method for a p70S6 kinase modulator using Group I compounds, classified in class 514, subclasses 336, 344, 345, 349, 350, 351 and 352, *inter alia*.

VIII. Claim 41, drawn to a screening method for a p70S6 kinase modulator using Group II compounds, in class 514, subclasses 256, 269, 272, 274, 275, *inter alia*.

IX. Claim 41, drawn to a method of screening for a p70S6 kinase modulator using the compounds of Group III, classified in class 514, subclasses 241 and 245, *inter alia*.

X. Claim 43, drawn to a method of inhibiting abnormal metabolic activity in a cell using the compounds of Group I, classified in class 514, subclasses 336, 344, 345, 349, 350, 351 and 352, *inter alia*.

XI. Claim 43, drawn to a method of inhibiting abnormal metabolic activity in a cell using the compounds of Group II, classified in class 514, subclasses 256, 269, 272, 274 and 275, *inter alia*.

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XII. Claim 43, drawn to a method of inhibiting abnormal metabolic activity in a cell using Group III compounds, classified in class 514, subclasses 241 and 245, *inter alia*.

Each group as set forth above lacks unity with each other group, i.e., there is no single general inventive concept. The unique special technical features in each group are the identities of the compounds as pyridines, pyrimidines and triazines. The technical relationship between the inventions does not involve at least one common or corresponding special technical feature. The expression "special technical feature" is defined as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art. In this case, a reference that could be used to reject the compounds, compositions and metabolites of Group I could not be used to reject the compositions and methods of any of the other Groups II-XII.

The Group I invention has special technical features not common to Groups IV-XII and would be expected to be useful other than as disclosed, e.g., anticoagulants (US 20070249578). The Group II invention has special technical features not common to Groups IV-XII and would be expected to be useful other than as disclosed, e.g., metalloprotease inhibitors (US 20070155739). The Group III invention has special technical features not common to Groups IV-XII and would be expected to be useful other than as disclosed, e.g., herbicides and plant growth regulators (US 20030204083).

A telephone call was made to Mr. Michael S. Greenfield on Jan. 24, 2008 to request an oral election to the above restriction requirement, but did not result in an election being made.

To preserve a right to petition, the reply to this Office Action must distinctly and specifically point out supposed errors in the restriction requirement, or the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that a complete reply to this requirement must include (i) election of an invention to be examined though the requirement be traversed (37 CFR 1.143) and (ii) identification of claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, election shall be treated as an election without traverse. Traversal must be presented at the time of election to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cecilia M. Jaisle, J.D. whose telephone number is 571-272-9931. The examiner can normally be reached on Monday through Friday; 8:30 am through 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James O. Wilson/
Supervisory Patent Examiner
Art Unit 1624

Cecilia M. Jaisle, J.D.